

## **Wyoming to Lead Further Investigation of Water Quality Concerns Outside of Pavillion with Support of EPA**

The State of Wyoming is announcing that it will further investigate drinking water quality outside of Pavillion, Wyoming. This will be done with the support of the U.S. Environmental Protection Agency (EPA). The State's investigation seeks to clarify water quality concerns and lay the groundwork for any further action to protect drinking water resources. Wyoming will continue its work to assure residents have a clean source of drinking water available. The Wyoming Department of Environmental Quality (WDEQ) and the Wyoming Oil and Gas Conservation Commission (WOGCC) will lead this investigation have provided few answers to citizens who report objectionable taste and odor in their well water. The Environmental Protection Agency (EPA) investigated groundwater issues in the Pavillion gas field for more than three years, through five phases of sampling. Domestic well sampling results, across all five phases, documented constituents of concern, but a source of those constituents has not been determined. EPA efforts to evaluate potential migration pathways from deeper gas production zones to shallower domestic water wells in the Pavillion gas field are inconclusive.

"It is in everyone's best interest – particularly the citizens who live outside of Pavillion – that Wyoming and the EPA reach an unbiased, scientifically supportable conclusion," Governor Mead said. "I commend the EPA and Encana for working with me to chart a positive course for this investigation. I commit that Wyoming will work in a thoughtful and productive manner as further investigation is initiated."

Fourteen domestic water wells located in the Pavillion oil and natural gas field – PGDW05, PGDW14, PGDW20, PGDW21, PGDW23, PGDW30, PGDW32, PGDW33, PGDW41, PGDW42, PGDW44, PGDW45, PGDW49, and LD02 – will be further evaluated for water quality and palatability concerns. Wyoming, through the Wyoming Oil and Gas Conservation Commission (WOGCC) and the Wyoming Department of Environmental Quality (WDEQ) will initiate a comprehensive review of all relevant data and additional science-based investigation.

Four years ago, at the request of citizens living outside of Pavillion who reported objectionable taste and odor in their well water, the EPA has been working with the State of Wyoming and the Northern Arapaho and Eastern Shoshone Tribes to identify the source and extent of impacts on domestic well water quality. To date, after five phases of sampling, the EPA's domestic water well sampling results have documented constituents of concern, but a source of those constituents has not been determined. EPA efforts to evaluate potential migration pathways from deeper gas production zones to shallower domestic water wells in the Pavillion gas field are inconclusive.

Wyoming, through the Wyoming Oil and Gas Conservation Commission (WOGCC) and the Wyoming Department of Environmental Quality (WDEQ) will initiate a

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comprehensive review of all relevant data and additional science-based investigation. The sampling data obtained throughout the EPA's groundwater investigation will be considered in Wyoming's further investigation. The EPA and Encana Oil and Gas USA (Inc.) will have the opportunity to provide input to the State of Wyoming, which plans to complete and release a final report by September 30, 2014.

While the EPA stands behind its work and data, the agency recognizes the State of Wyoming's commitment to further investigation and does not plan to finalize or seek peer review of its draft Pavillion groundwater report nor rely on the conclusions in the report. EPA is conducting a major research program on the relationship between hydraulic fracturing and drinking water in different areas of the country and will release a draft report in late 2014. The EPA will look to the results of that national program as the basis for its scientific conclusions and recommendations on hydraulic fracturing.

"In light of this announcement, we believe that EPA's focus going forward should be on using our resources to support Wyoming's program, which will build on EPA's monitoring results," said EPA Acting Administrator Bob Perciasepe. "We recognize the leadership of Wyoming in assuring safe water for residents outside of Pavillion and look forward to partnering with the State as it conducts its investigation."

"Encana has chosen to make a grant in the amount of \$1.5 million to the Wyoming Natural Resource Foundation for a statewide education through the Wyoming Association of Conservation Districts and further investigation in conjunction with initiatives that support and protect rural water supplies and ensure related regulatory programs are efficient and effective," stated Jeff Wojahn, U.S. President of Encana Oil and Gas (Inc.). "The Wyoming Association of Conservation Districts, among other things, provides leadership for the conservation of Wyoming's soil and water resources and also promotes the wise use of Wyoming's water. Additionally, Encana will continue to provide funding to the Wyoming Association of Rural Water Systems, a third-party entity that has been providing water for certain Pavillion residents."

Wyoming retains the discretion to allocate the grant from Encana to the Wyoming Natural Resource Foundation to support the State's efforts, without limitation, as the next phase of this investigation is initiated. "Wyoming and Encana understand the importance of water in this state and I am pleased to see their continued commitment to the scientific investigation and to provide water to the residents while that investigation progresses," Governor Mead said.

In 2012 Governor Mead and the Wyoming Legislature appropriated \$750,000 for the design, construction and installation of residential cistern systems and a water loading station in the Town of Pavillion. Installation of 20 cisterns and the water loading station should be finished soon. There will be other opportunities for residents who live outside of Pavillion and have not yet requested a cistern to do so.

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Wyoming will work with residents to identify acceptable means of providing water to their rural homes for years to come and may provide support for water deliveries on a long-term basis. Wyoming will continue to strive to meet one of its highest priorities – finding solutions to drinking water concerns of its citizens.

The WDEQ will review all relevant data for each of the fourteen domestic water wells previously identified. In its review, the WDEQ will evaluate the data, conclusions and recommendations contained in the WOGCC's well bore integrity and pits final reports. Based on its review, the WDEQ will conduct two rounds of monitoring of some or all of the fourteen domestic water wells. The WDEQ will determine if further investigation, including additional monitoring, is necessary using exceedances of EPA primary and secondary contaminant levels and WDEQ Water Quality Rules and Regulations as a trigger.

"Wyoming and Encana understand the importance of water in this state and I am pleased to see their continued commitment to the scientific investigation and to provide water to the residents while that investigation progresses," Governor Mead said. In 2012, the Wyoming Legislature appropriated \$750,000 for the design and construction of cistern systems and a water loading station in the Town of Pavillion. Installation of twenty cistern systems and the water loading station is scheduled to occur shortly. There will be other opportunities for Pavillion residents who have not requested cisterns to do so. The State will work with residents to identify acceptable means of providing water to their rural homes. Wyoming is meeting its highest priority – finding solutions for drinking water.

Fourteen domestic water wells located in the Pavillion oil and natural gas field will be further evaluated for water quality and palatability concerns. The WOGCC will prepare a report concerning the status and reclamation of pits in the Pavillion Field. In addition, WOGCC will prepare a report concerning the integrity of all oil and natural gas exploration and production wells within 1320 feet of the fourteen domestic water wells with identified water quality issues.

The WDEQ will evaluate the data, conclusions and recommendations contained in the WOGCC's well bore integrity and pits final reports. In its review the WDEQ will consider all relevant data for each of the fourteen domestic water wells. The WDEQ will then conduct two rounds of monitoring of some or all of the fourteen domestic water wells. The WDEQ will determine if further investigation, including additional monitoring, is necessary using exceedances of EPA primary and secondary contaminant levels and WDEQ Water Quality Rules and Regulations as a trigger. Activities in the Pavillion gas field highlight several considerations including the importance of collecting baseline water quality data and proper water quality information and education. Wyoming has initiated a process for establishing a uniform regulation for the collection of baseline water quality data prior to and after oil and natural gas development.

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Attachment – Investigation Document